

TRANSACTIONS OF THE NEW YORK SURGICAL SOCIETY.

Stated Meeting, January 8, 1908.

The President, DR. JOSEPH A. BLAKE, in the Chair.

TECHNIQUE OF NEPHRECTOMY.

DR. SAMUEL ALEXANDER presented four patients who had been subjected to nephrectomy by him, for the purpose of illustrating a method of surgical approach to the kidney which he had practised in most of his cases requiring nephrectomy during the past two years.

The incision was crescentic in shape, with the convexity of the crescent directed backward. The incision began at the lower border of the 12th rib at a point about two inches from the angle made by this rib with the erector spinæ muscles. The greatest convexity of the incision corresponded with the outer border of this muscle, and the lower arm of the crescent was carried downward and forward, and ended at a point about two inches below the crest of the ilium. In its deepest points the incision followed the outer border of the quadratus lumborum muscle and the outer border of the latissimus dorsi muscle. In subjects of unusual muscular development, the muscle fibres of the outer border of the latter muscle had to be divided. The skin and subcutaneous fat inclosed in this incision formed a flap which could be drawn outward, thus affording the maximum amount of space. The lumbar fascia was then divided, and the peri-renal fatty capsule exposed.

The advantages claimed for this incision were: 1. That it gave ample room for the exploration of the kidney and for its delivery upon the loin. 2. There was a minimum division of muscle structure, and therefore the occurrence of ventral hernia was prevented.

In one case, the first in which this incision was used, the

crescentic incision was converted into the form of the Greek letter epsilon in order to secure more space than the first incision afforded. The crescentic incision had been used by Dr. Alexander in cases of rupture of the kidney, renal calculus, pyelonephrosis, tuberculosis, etc., with satisfaction and it could be recommended as doing away in most cases with the very extensive incisions which had come into fashion in recent years.

CASE I.—Male, 38 years old, a salesman, was admitted to Bellevue Hospital on May 25, 1906, and was operated on for prostatic abscess and stricture, a perineal prostatectomy being done. He was discharged on July 11, 1906, and remained well for about ten weeks. He then began to drink heavily and complained of some pain in the loin, which gradually disappeared. In May, 1907, he had fever and developed a pain in the right side. He went to the Post-Graduate Hospital, where he was operated on for gall-stones, and the gall-bladder was removed. He did not know if gall-stones were found. He remained in the hospital about a month, and left improved, but still complaining of pain in the right side.

When the patient was re-admitted to Bellevue Hospital, on October 1, 1907, he made the statement that his urine had always been "dirty," and a week before admission he began to have difficulty in urination. He had pain in the region of the right kidney which radiated down the loin into the genitals. On Sept. 21 he stated that he had passed a small putty-like mass, which on drying became hard, like lime.

Examination of the abdomen revealed tenderness on pressure in the right hypochondrium, with rigidity of the right rectus, possibly due to adhesions about the old scar along the costal margin anteriorly. A catheter was introduced and met with resistance in the prostatic urethra. This was dilated to 25 F. A cystoscopic examination showed marked redness and congestion about the right ureter, which was greatly dilated and from which pus was flowing. Upon massaging the right kidney, thick pus could be seen coming from its ureter. The left ureter was normal. The urine was light yellow; acid, with a specific gravity of 1.012, and contained a heavy sediment. The microscope showed many pus cells.

Operation: The kidney was very adherent, on account of the former gall-bladder operation. It was delivered with diffi-

culty, and the pedicle ligated *en masse*. The wound was drained and partly closed. The kidney was twice its normal size and contained four large abscess cavities, which drained into the pelvis, and many small abscesses.

The patient was discharged on December 5, 1907, in good general condition, with a small sinus posteriorly about 4 inches deep.

CASE II.—This patient was a Greek cigar-maker who was admitted to Bellevue Hospital on November 6, 1906. He denied all venereal history and stated that he had always been well, with the exception of the fact that about twelve years ago he had passed a stone about the size of a coffee bean.

Twelve days prior to admission he had severe pain in the right side of the abdomen and in the lumbar region, with frequency of urination. The pain did not radiate down into the testis, and gradually subsided. Four days after this attack the patient noticed that his urine was red; this continued for two days.

At the time of his admission he had neither pain nor hemorrhage, but attempts to urinate sometimes caused pain in the region of the right kidney. The right kidney was movable and easily palpated. The left kidney was also movable and palpable; not tender.

Operation, Nov. 17, 1906: The kidney was found to be greatly enlarged, and a small calculus was felt in the upper part of the ureter. While the renal artery was compressed, a blunt-pointed bistoury was thrust into the posterior surface of the kidney. When this was removed, a large amount of cheesy material was squeezed out. The kidney was then split longitudinally, and many miliary abscesses were found in its substance. After the kidney was delivered the ureter was examined by a probe, and a small calculus pushed into the bladder. The patient made a rapid recovery and left the hospital on November 28, 1906, with the wound nearly healed. The wound closed completely two weeks later.

CASE III.—The patient was a man, a patient of Dr. Alexander Lambert, who entered the hospital on March 7, 1906, complaining of hematuria which had been constant for two weeks. He had no frequency of urination, and no pain associated with the act. He complained of a dull, heavy sensation in the right loin, and while he gave no history of renal calculus he stated that

about twenty years ago he had passed on several occasions a large quantity of sand. This, however, was not accompanied by the passage of blood. He had gonorrhœa sixteen years ago, and again twelve years ago. During the last attack he had intense pain in the right side of the back extending down the right thigh and into the testicle. He had at that time frequent urination and a right-sided epididymitis, and stated that his gonorrhœa was followed by a stricture, which was cut internally. He had no history of cancer or tubercle.

An examination of the patient's urine showed that it was uniformly bloody. There was no residual urine. The urethra easily admitted a 26 F. blunt sound, and the capacity of the bladder was nine ounces. After the bladder was washed clean, clear fluid injected into it became bloody within half a minute, showing bleeding from the kidney. The sensitiveness of the bladder was not increased; no calculus was present. The right kidney was increased in size and palpable, and there was rigidity of the right abdominal wall. Pressure over the pelvis of the kidney caused pain to radiate along the course of the ureter to the end of the penis.

A cystoscopic examination showed a slightly inflamed bladder, congested in spots, but free from ulceration. The left ureter was normal in appearance, and discharging clear urine. The right ureter was situated in a depression, surrounded by a red and ulcerated area, and discharging blood and blood clots. The absence of tubercles in the urine and the presence of a large number of triple phosphate crystals made a diagnosis of renal calculus most probable, with retention of urine in the kidney, causing secondary phosphatic deposit.

Operation, March 20, 1906: The kidney was exposed by the usual crescentic incision, and a transverse incision was made through the skin and inner border of the quadratus lumborum muscle; this was two inches in length, beginning at the point of the greatest convexity of the first incision. The amount of perirenal fat was excessive. This was grasped firmly with strong pedicle forceps and divided between them, constant traction being made upon the forceps to draw the fatty capsule outside of the wound. The capsule of the kidney was adherent by numerous rather strong bands to the fatty capsule; the latter was cut away as the kidney was freed by the finger. The kidney was then

delivered upon the loin. It was of a mottled bluish-white color, and was much increased in size. In the upper pole, near the pelvis, a hard nodule could be felt. No stone was detected by palpation. On drawing the kidney forward, the pelvis was seen to be very much dilated. An incision sufficiently large to admit the index finger was made with a blunt bistoury through the kidney and into the pelvis, and the pelvis and calyces were explored by the finger. The hemorrhage was completely controlled by the finger in the wound. On the margin of this incision into the kidney there was a yellowish area which was in marked contrast to the purple congested surface of the cortex; a portion of this was cut out and on close inspection showed a number of small miliary spots which were regarded as tuberculous. The kidney was then removed, after tying off the pedicle with No. 2 chromicized catgut. The pelvis of the kidney was opened, and a bougie-a-boule passed into the bladder, which showed that the ureter was patent throughout its course. It was ligated with No. 2 chromicized catgut. The renal vessels were then grasped with a pedicle clamp on the distal side of the ligature, and divided with scissors; the ureter was then divided; a second ligature was then placed around the renal vessels and the clamp removed.

The kidney pelvis was found to be the seat of numerous ulcerations, surrounded by a zone of ecchymosis. Miliary tubercles were found in the pyramids, and the hard nodule near the upper pole proved to consist of a collection of small nodules, many of which were undergoing cheesy degeneration.

CASE IV.—*Multiple miliary abscesses of the kidney secondary to multiple prostatic abscesses. Perineal prostatectomy followed by nephrectomy. Recovery.* The patient was a physician, 24 years old, who was operated on May 3, 1906, for gangrenous appendicitis. The following September he infected his hand while operating, and as a result of this suffered from general sepsis. A month later he had an attack of typhoid fever lasting six weeks. In January, 1907, he contracted a urethral discharge which at first seemed a trivial matter, but in the course of two weeks numerous foci of suppuration developed in his prostate, together with a profound sepsis. On February 8, 1907, perineal prostatectomy was done, both lateral lobes being removed. These were the seat of multiple abscesses, the largest containing about half an ounce of pus. On the following day the perineal drainage

tube was removed. On February 16 the left epididymis became inflamed. On the 17th the patient complained of severe pain in the region of the right kidney, but as his temperature was normal, the pain was attributed to the epididymitis. On the 18th the patient was sitting up in a chair with a normal temperature. On the 21st, two weeks after operation, nearly all of his urine was voided through the urethra. Two days later, about two o'clock in the morning, he was seized with acute general pain in the abdomen which gradually became circumscribed in the region of the right kidney. The patient was nauseated and expelled much gas. At 8.45 A.M. the same day he had a severe chill; pain in the region of the right kidney continued and the patient vomited clear fluid. At 2.45 P.M. he had another chill and vomited a dark green fluid. Examination of the abdomen showed rigidity on the right side. There was severe pain on pressure over the kidney and also in the lumbo-costal region. His temperature, however, did not go above 98 until the second day of the attack, when it reached 102. On February 25 he had another severe chill, and an operation on the kidney was determined. A nephrectomy was thereupon done, and the patient made a slow recovery.

The four patients when presented were in perfect health, and the scars resulting from the operations were firm, small, and there was no weakening of the abdominal wall.

TRAUMATIC EPILEPSY.

DR. GEORGE E. BREWER presented a man of 30. Thirteen years ago he fell and sustained an injury to the right side of his head. Some five years after this injury he began to have epileptiform attacks. These at first occurred every five or six months, but later became more frequent, and during the past three months they had been repeated several times a day, unless controlled by bromides.

The patient was admitted to the Roosevelt Hospital for observation, and it was found that the attacks began by convulsive movements on the left side of the face and arm, afterwards extending to the left leg and finally becoming general. On the advice of Dr. L. Pierce Clark an osteoplastic resection was made over the right motor area. On removing the dura, a thickened mass was found, posterior to the Rolandic fissure, which on further examination was found to contain a small fragment of bone, which had evidently been driven through the dura and

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into the substance of one of the convolutions. This was removed, the dura united, and the bone flap replaced. The patient made an uninterrupted recovery, and while before the operation he had as many as six or eight convulsions a day, he had not experienced a single one since he left the operating table. Dr. Brewer said that he did not feel justified, however, in offering a favorable prognosis, as the epileptic habit had been established for such a long time. He presented the case merely as one in which a definite lesion had been found.

DR. GEORGE WOOLSEY said that these operations were frequently done without finding anything. He recalled one successful case, which was already on record, where he found a spicula of bone projecting through the dura and surrounded by a cyst. According to the location of the lesion described by Dr. Brewer, it must have been behind the motor area in the sensory area, and was in corroboration of the view that a lesion of the sensory area might give rise, in a reflex manner, to epileptic disturbances. The speaker said that a case of idiopathic epilepsy of the Jacksonian type, of many years' duration, without any history of trauma, recently came under his observation, in which the attacks began by convulsive movements of the left hand. He exposed the motor area and with a single wire electrode was able to locate the hand centre in the precentral convolution, but there was nothing found here to account for the epilepsy. The question arises whether the cause of the irritation in this case also may have been in the sensory area, but as this is extensive and regional localization in it is not so accurately known, operation could not be so intelligently undertaken as in the motor area.

DR. BREWER, in reply to a question, said that electrical stimulation of the exposed brain area was not resorted to in his case. He had asked Dr. Clark what had led him to predict the presence of a lesion posterior to the motor area, and he said that he had based his opinion upon the following reasons: 1. That after thirteen years' existence, a motor lesion of sufficient size to produce such violent disturbance would probably have resulted in some paresis by this time. 2. That the epilepsy still retained its focal type. This fact had often been observed in cases where the lesion was a little remote from the motor area. 3. That not infrequently the lesion in these cases was in the sensory area, the motor explosion being simply a secondary affair.

TRAUMATIC RUPTURE OF THE PANCREAS.

DR. GEORGE E. BREWER presented a girl, eight years old, who had sustained a severe contusion of the epigastric region from a fall. The injury was followed by symptoms of profound shock, and when she was brought to the Roosevelt Hospital she seemed almost in a state of collapse, with feeble, shallow respirations, great pallor, cold perspiration and an almost imperceptible pulse. The condition was such as to preclude the thought of operation for the time being. She was placed in bed, surrounded by hot water bottles, and stimulating measures were applied. She rallied slowly and on the following day presented the following condition: Mind clear; pulse, 130; temperature, 99.5; abdomen distended, rigid and tender to palpation in the epigastric and left hypochondriac regions. There was evidence of free fluid in the peritoneal cavity, but no gas. The urine showed two and a half per cent. of sugar. The case was regarded as one of a visceral lesion and under ether anesthesia an incision was made through the left rectus muscle. The spleen was found slightly fissured along its anterior border, but the chief source of hemorrhage seemed to be in the region of the tail of the pancreas. This for an area about the size of a silver half dollar was crushed, and as soon as the blood clots were removed it bled freely. There was considerable ecchymosis of the surrounding tissues, particularly in the colon and the transverse mesocolon, in which there was a ragged tear. A mass of handkerchief gauze was packed over the bruised area, the distal end of which was allowed to protrude through a counter-opening near the anterior extremity of the 12th rib. All fluid and clotted blood was removed by flushing the abdominal cavity with normal salt solution. The original wound was closed tightly. The patient made an uninterrupted recovery.

In reply to a question, Dr. Brewer said that sugar was only present in the urine for one day. There was no necrosis of the wound, but the wound where the gauze was inserted healed very slowly.

HYDATID CYST OF THE LIVER WITH LIGATURE OF THE PORTAL VEIN.

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HYDATID CYST OF THE LIVER WITH LIGATURE OF THE PORTAL VEIN.

DR. GEORGE E. BREWER presented a woman, 38 years old, who was admitted to the Roosevelt Hospital suffering from an

epigastric tumor with periodic attacks of pain in the right hypochondriac region. Previous history negative. Three months before admission, the patient had suffered from an acute attack of pain in the region of the gall-bladder, associated with nausea and vomiting. Following this attack there had been a slight jaundice, which soon disappeared. Since that time the patient has suffered from similar attacks on a number of occasions, the pain, however, being more centrally located, and the point of greatest tenderness being just beneath and to the right of the ensiform.

On examination, an oval, elastic tumor was easily palpated in the mid-line, midway between the ensiform and the umbilicus. The tumor was deeply seated, apparently fixed to the deeper structures, and was moderately tender to pressure. The diagnosis rested between an echinococcus cyst of the left lobe of the liver and an abnormally located gall-bladder. An incision was made under general anesthesia extending from the ensiform to a point one inch below the umbilicus. When the peritoneal cavity was opened, a large oval mass was seen presenting in the mid-line and pressing upward the gastro-hepatic omentum and stomach. The gastro-hepatic omentum seemed thickened and highly vascular. A distinct sense of fluctuation could be felt within the tumor, which was apparently fixed to the inferior surface and posterior border of the liver. The right free border of the lesser omentum was felt, and the duct and hepatic vessels palpated. To avoid these structures, an incision was made through the gastro-hepatic omentum, exactly in the mid-line of the body, over the centre of the tumor, which exposed a smooth gray structure, which was supposed to be the fibrous envelope of the tumor. A large exploring needle was introduced through this fibrous structure, and clear fluid withdrawn. On withdrawing the needle, an active hemorrhage took place from the small opening. On attempting to control this by hemostatic forceps a larger rent was made, which resulted in a very copious flow of dark colored blood. The hemorrhage was temporarily arrested by digital pressure, and, dissecting away the superficial tissues, it was found that the structure which was supposed to be the fibrous capsule of the tumor was in reality a large vein, nearly 1 cm. in diameter, passing upward from the region of the pancreas to the transverse fissure of the liver. The calibre of the vein had evidently been much encroached

upon by the growth of the tumor, over which it passed in a flattened and ribbon-like condition. The vein from the upward pressure of the tumor was under a good deal of tension, and its walls were exceedingly friable. Two careful attempts to suture the wound were made with fine silk and a minute round needle. As soon as the pressure was removed, and blood coursed through the vessel, the stitches were torn out and the hemorrhage recurred. The vessel was finally doubly ligated, above and below the seat of injury.

As it was impossible to remove the tumor, and as it was impossible to bring it to the surface of the wound in such a manner as to unite its fibrous capsule with the abdominal wall, after packing off the intestines and all of the surrounding peritoneal space with a large mass of handkerchief gauze, the cyst was freely opened and its fluid contents syphoned off. After this the gauze was removed and a large rubber drainage tube was securely sewed into the cyst opening. This was surrounded by a small mass of gauze packing, which extended from the surface of the tumor to the abdominal wall. The wound was closed, with the exception of that point through which the tube and packing emerged. The operation was a long one, and was followed by a considerable reaction. The temperature rose on the following day to 103° and later to 104° . The pulse was very rapid, but of good quality. The patient suffered only slight pain, and was soon able to take food in abundance.

The first dressing occurred on the third day, when the cyst was irrigated with normal salt solution, and a large amount of cloudy fluid and daughter cysts removed. At the second dressing, two days later, the cyst was washed out with a solution of nitrate of silver 1-8000. This was repeated every day, the strength of the solution being gradually increased until 1-2000 was employed. The result of this was to cause a marked shrinkage and opacity of the daughter cysts, which were washed away and continued to appear in the washings for some three weeks. The packing surrounding the tube was removed during one of the early dressings, but the tube was retained for five or six weeks, until the amount of secretion from the cyst cavity had been reduced to a very small amount. The wound was then allowed to heal by granulation. The temperature remained between 101° and 104° for three weeks, and then gradually came

down to normal. With this exception the patient presented absolutely no signs of illness or interference with normal nutrition. In fact, she had gained steadily in weight and color, and from being an anæmic and emaciated invalid had grown into a robust and healthy woman. The urine and other excreta have been carefully examined from time to time by Dr. W. J. Gies, Director of the Department of Biology of the College of Physicians and Surgeons, who reports no departure whatever from the normal.

The only explanation of this failure to observe marked changes in the nutrition of the patient seems to the writer to be that in the gradual growth of the tumor from below upward, the portal vein was carried away from its normal position toward the mid-line, and as a result of increasing pressure and the associated stretching of the vein, its calibre became gradually reduced and the collateral circulation was thereby established, which at the time of operation was so near complete that the diversion of the small amount of blood which was then passing through the obstructed vessel caused no perceptible increase in symptoms. This theory was strengthened by the fact that in the first incision one or more very large subcutaneous veins were encountered in the region of the umbilicus, such as were often found in advanced cirrhosis of the liver, or after Narath's operation.

SEPARATION OF UPPER EPIPHYSIS OF HUMERUS WITH DISLOCATION.

DR. ELLSWORTH ELIOT, JR., presented a boy, 14 years old, who was admitted to the Presbyterian Hospital on October 27, 1907, with the history that sixteen days before he had been knocked down by an automobile. He was unconscious for a time. Shortly after the accident, upon regaining consciousness, he complained of pain and disability in the right shoulder. The case was regarded as one of dislocation, and prior to his admission to the hospital two unsuccessful attempts had been made by the family physician to effect reduction under anesthesia. An examination revealed the fact that there had evidently been a separation of the upper epiphysis of the humerus, with displacement downward. An X-ray was taken, which showed the position of the head of the bone and the fact that the line of fracture corresponded very closely to the epiphyseal line.

The joint was exposed through a Y-shaped incision, one arm

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of which passed through the deltoid, just below the acromion process, the other through the clavicular portion of the pectoralis major. Dr. Eliot said he had used this in a number of cases. It did not interfere with the nerve supply of either muscle, and gave an admirable exposure. When the parts were retracted it was found that the capsule of the joint was intact; the upper fragment could be distinctly felt within the capsule, and a few fibres of the latissimus dorsi were still attached; this, together with gravity, had displaced the head of the bone downward below the inferior lip of the glenoid cavity.

The upper end of the fragment was then exposed, and an attempt made to correct the deformity. With the arm abducted, this was quite possible, but when an attempt was made to extend the arm, the deformity recurred. The fragments remained in perfect apposition, however, with no tendency to displacement, when the arm was abducted to 45 degrees.

The wound was closed and the arm placed in a position of abduction of about 45 degrees, an extension apparatus of about five pounds was applied and kept in place three weeks. At the end of that time union was sufficiently advanced to prevent a recurrence of the deformity, and the arm could be placed in the ordinary position by the side of the bed. About this time the patient developed an attack of catarrhal appendicitis, of which he had had several previous attacks, and the appendix was removed. He was discharged, cured, on December 13, 1907. The operation on the shoulder joint was done on Nov. 1, and the functional result at the present time is practically perfect.

In connection with this case, Dr. Eliot exhibited an X-ray picture which still showed a slight amount of displacement, with the head of the bone in the glenoid cavity.

DR. ROYAL WHITMAN said that he had hoped to present a patient illustrating a perfect functional result after separation of the upper epiphysis of the humerus whom he had treated by a method which he thought should be more effective than that usually employed. The fragments having been separated by manipulation, the diaphysis was apposed to the epiphysis by traction and abduction, using the acromion, if need be, as a fulcrum. The arm in extension and full abduction was then raised to a position nearly parallel to the body line, and fixed by means of a plaster bandage until consolidation was assured. In Dr. Eliot's

case, although perfect adjustment of the fragments had been attained by the open operation, yet partial displacement had recurred afterwards. This was illustrated by the X-ray picture and demonstrated by the marked limitation of the range of abduction.

In reply to a question by Dr. Eliot, whether the method he had described could be successfully applied two weeks after the injury, Dr. Whitman said it should at least be tried, then it might be supplemented by the open operation if the fragments could not be disengaged.

Dr. Whitman said the aim of abduction was to approximate the upper fragment to the lower, the arm was raised above the head because it might be more conveniently fixed in this attitude. In the case presented, function should be improved as the irregularities at the site of the injury were lessened by the developmental changes. It would be, however, of advantage if primary and more accurate adjustment were possible because in some instances even comparatively slight displacement of the epiphysis had resulted in loss of growth.

DR. F. KAMMERER said he recently saw a woman, about 40 years old, who on December 24, 1907, sustained a sub-coracoid dislocation and a fracture of the surgical neck of the humerus on the same side. Six days after the injury, under anesthesia, the speaker said he was able to reduce the dislocation without operation. After several unsuccessful attempts to effect reduction by moderate traction on the lower part of the humerus and direct pressure on the head toward the cavity, and when he had practically made up his mind that an open operation would be necessary, he finally succeeded by manipulations. The four fingers of the right hand, excluding the thumb, could be passed around the head of the humerus with great ease, when muscular relaxation was perfect, and thus firm traction could be exerted.

DR. BREWER said that about a year ago he saw a case of this kind ten weeks after the injury in which the X-ray showed practically the same state of affairs as those described by Dr. Eliot; namely, deformity, epiphyseal separation and downward displacement. He did an open operation, and found, as Dr. Whitman had said, that by raising the arm the deformity was reduced, while bringing it down tended to cause separation of the frag-

ments. The speaker said that in his case a second operation became necessary, and at that time the arm was kept in the upright position for six weeks and a perfect functional result obtained.

DR. ELIOT, in closing, said that in his case, abduction was still improving, and he thought there was a fair probability of its complete restoration. The patient was now able to abduct the arm to about 60 degrees. At the time of operating, the reduction of the deformity required considerable traction because of the displacement of the head of the humerus downward.

OPERATION FOR UMBILICAL HERNIA.

DR. CHARLES N. DOWD presented a woman, 45 years old, who was admitted to the General Memorial Hospital in November, 1906. She had been suffering from a large umbilical hernia for fifteen years. The hernial mass was about 8 inches in diameter, and could not be reduced. There were various apertures in the fibrous portion of its wall. A gurgle could be distinctly heard on effort at reduction.

She was put on a restricted diet in the hospital, given saline cathartics and instructed to walk about the hospital corridors for a considerable period each day, and in this way her weight was reduced five pounds by December 5, but no success was met with in reducing it beyond that point.

Dr. Dowd operated on December 12, 1906, dissecting back the skin and subcutaneous tissue, and laying bare the fascia about three inches from the umbilical ring. On cutting through the hernial sac, to which he left a transverse ellipse of skin attached, he found that the contents of the sac were almost entirely intestine with a thickened mesentery, which contained a large amount of fat. There was hardly any omentum present, and what there was was adherent both to the sac and to the intestine in such a way as to make it impossible to dissect any large portion of it away. The adhesions between the intestine and the wall of the hernia were dissected away. It was impossible to avoid injuring the intestinal wall somewhat in this procedure, and two or three catgut purse-string sutures had to be taken. The amount of intestine which protruded through the ring would just about have filled a derby hat, and it was with the utmost difficulty and no small amount of force that they were returned into the abdomen. The transverse colon was the portion of intestine most involved.

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The gap in the abdomen was closed by the Mayo overlapping method, with kangaroo tendon and chromic gut. There was some vomiting and prostration after the operation, but on December 15 gas and feces were passed. On that day her pulse was 80; temperature, 100. She still had a tendency to vomit, but looked well and made an uninterrupted recovery.

Dr. Dowd said there was no question about the value of the overlapping method of treating umbilical hernia—he had used it many times but this particular case furnished the most severe test of the method which he had seen.

NECK INCISIONS AND NERVE INJURIES.

DR. CHAS. N. DOWD presented three cases showing the effects of injury to the spinal accessory or lower filaments of the facial nerve, stating that these nerves had frequently been injured in neck operations with the feeling that the ill effects were usually temporary, and in any case were not very important. These cases had recently come to his notice and illustrated what might be expected from these injuries in certain instances.

He also showed three cases illustrating the difference in the results of longitudinal and transverse scars in the neck. Neck scars were so much dreaded that patients often postponed or avoided operations which were really needed, and although thoroughness of operation was the main desideratum, if that thoroughness could be accomplished through a transverse incision, the welfare of the patient was promoted since transverse incisions seldom stretch while longitudinal ones usually do.

CASE I was admitted to St. Mary's Hospital in March, 1898, about ten years ago. She was then five years old and had enlarged lymph nodes and numerous abscesses for three years. She also had a large mass of nodes and many cicatrices on the right side of the neck. An extensive dissection was done, and the sterno-mastoid muscle was cut above the entrance of the spinal accessory nerve, and the nerve was also divided. The portion of the nerve which supplied the sterno-mastoid muscle failed to unite, and there was an atrophy of that muscle. The trapezii, however, were normal, possibly because the nerves of the cervical plexus were sufficient to supply the muscle. She had very little shoulder droop and moved her head perfectly well. The change in the contour of her neck was the principal ill-effect which had followed the injury.

She was entirely free from recurrence, and had made an excellent recovery.

CASE II was admitted to St. Mary's Hospital on March 7, 1898, when he was eight years old. He had for two years suffered from tubercular cervical lymph nodes, with abscess formation. In the course of the dissection, which was very extensive, the posterior branch of the spinal accessory nerve, between the sternomastoid and the trapezius, was divided. Ten years after the operation he had a partial atrophy of the trapezius, which was about one-quarter the size of the other. The shoulder blade set higher than the other, and was rotated so that the lower angle projected backward, and the upper angle projected upward and forward at the trapezius border. The shoulder drooped and was also carried forward. This shoulder was not as strong as the other, but he was able to work as a brick-layer and said that he was not incapacitated for his work or for carrying weights. The right pectoralis was atrophied, and the motions of his chest were much less marked on the right than on the left side. He had no return of tuberculosis.

CASE III was first admitted to St. Mary's Hospital on December 26, 1896, with the history of having had repeated operations at various times for very extensive cervical tuberculosis. The glands at one time or another had filled in the tissues all the way from the parotids to the scapulæ, and in the process of the various dissections which were necessary, the collo-mandibular ramus of the facial nerve was cut, with resulting deformity of the mouth. This was due to paralysis of the depressor labii inferioris: there was a failure in the drawing down of part of the lower lip, which caused asymmetry in speaking, smiling, etc. The injury of this nerve was often said to be temporary, but it was sometimes permanent, as illustrated by this case.

CASE IV.—This boy, who was admitted to St. Mary's Hospital in 1905 at the age of three years, illustrated the effect of removal of the lymph nodes through a transverse incision. He had been suffering from enlargement of the lymph nodes for ten months, and the operation was an extensive one. The masses of nodes which were removed were as large as a small-sized bunch of grapes. He had remained free from recurrence up to the present time and the scar on the neck was scarcely perceptible.

CASE V, who was admitted to the General Memorial Hospital

on February 26, 1907, showed the result of a similar operation on a man who had enlarged lymph nodes for a year. The nodes were extensive, requiring a large incision. At the present time, eleven months after the operation, he was free from recurrence and the scar was hardly visible.

CASE VI illustrated the result of a longitudinal scar which was made fifteen months ago for the dissection of nodes which were particularly abundant in the posterior chain. Although the underlying fascia was united so as to raise the incision line in a ridge, there was still a stretching of $\frac{1}{2}$ to $\frac{3}{4}$ inch in the resulting scar. This incision was curved forward at its lower end and in this transverse part there was no stretching.

DR. CHARLES A. ELSBERG, in speaking of injury to the mandibular branch of the facial nerve, said the resulting paralysis from this accident was usually temporary. In two of his cases, both young women, in whom it occurred and remained for some time without signs of improvement, he resorted to the subcutaneous division of the corresponding branch on the opposite side. The loss of function from the injury was insignificant, and by dividing the opposite branch the slight deformity became symmetrical and less noticeable.

DR. ALFRED S. TAYLOR said that in one of the cases shown by Dr. Dowd, where the injury to the spinal accessory nerve had produced considerable deformity, it might be advisable to dissect out both ends of the divided nerve and suture them.

DR. DOWD said he had not seen some of these cases for several years after the original operation, and he doubted whether suture of the nerve would be serviceable after such a long period had elapsed.

DR. TAYLOR said that cases were on record in which suture of the nerve 29 years after the injury had been followed by nerve regeneration and return of muscular power.

SUBPHRENIC ABSCESES.

DR. ALEXANDER B. JOHNSON presented a woman, 27 years old, who was admitted to the hospital with the history of a typical attack of acute appendicitis which had lasted one week. The signs and symptoms of generalized peritoneal irritation and of sepsis were well marked. Upon operation, gangrenous appendicitis and gangrene of the right ovary with diffuse peritonitis

were found. On the fourth day, the patient had a severe chill and a rise of temperature to 105°. During the following 48 hours the physical signs and symptoms of right suphrenic abscess developed. The abscess was approached by resecting the ninth rib and suture of the parietal and costal layers of the pleura. A large amount of foul pus was evacuated from between the liver and the diaphragm. The patient made a slow but perfect recovery during the next three months. She left the hospital ten days ago. It was interesting to note that the left ovary also became gangrenous, and was discharged as a slough through the drainage opening which had been made in the vagina. The patient has not menstruated since.

DR. JOHNSON also presented a man, 30 years old, who was admitted to the hospital with the signs and symptoms of acute appendicitis 48 hours after the beginning of the attack. Operation showed a gangrenous appendix, with perforation and diffuse peritonitis. Ten days later an abscess situated in the left lower quadrant of the abdomen was incised, evacuating eight ounces of pus. Five weeks after the original operation, signs and symptoms of a right subphrenic abscess developed. The ninth rib was thereupon resected, and after suture of the costal and parietal pleuræ, one quart of pus was evacuated from between the liver and the diaphragm. The patient made a slow but complete recovery.

DR. JOHNSON, in reply to a question as to whether he made his incision through the diaphragm at once or subsequently, said that in one of the cases he had shown he had opened the diaphragm at once, and in the other he did not. In several instances where he had operated for abscess of the liver he had found that the two layers of the pleura showed no tendency to separate even though not adherent. In one of the cases of subphrenic abscess he had shown, the incision through the diaphragm was made at once, and there were no indications that air had entered the pleural cavity. In the other case he allowed an interval of 36 hours to elapse before incising the diaphragm. If the two layers of pleura were found infiltrated and adherent there could be no question about the propriety of immediate incision. If the diaphragm bulges up against the pleura, no air will enter upon incising the costal layer; if, on the other hand, the border of the lung can be seen moving freely up and down it will be safer to suture the

two layers and make the incision through the diaphragm after 24 or 36 hours.

DR. CHARLES H. PECK said that during the past summer he had operated on two cases of subphrenic abscess, one primary, the other following appendicitis, and in both he succeeded in getting good drainage by making an incision, resecting a portion of the costal cartilages in the mid-axillary line, and getting into the abscess below the pleural reflection without finding it necessary to go through the pleura. In a third case he did the same thing on the left side.

FRACTURE OF THE FEMUR OPENING INTO THE KNEE JOINT.

DR. ALEXANDER B. JOHNSON presented a man, 30 years old, who fell a distance of thirty feet with a ladder, striking upon his flexed knee. Upon admission to the hospital, examination showed the right knee flexed to an angle of 90 degrees. Active movement was impossible, and passive movement was very much restricted and painful. The knee was greatly swollen, and the condyles of the femur, together with the leg, were displaced backward. The sharp lower end of the upper fragment of the femur formed a marked projection upon the anterior aspect of the limb above the knee.

An immediate vertical incision near the middle of the anterior aspect of the thigh exposed the fractured femur opening into the knee joint. The lower extremity of the upper fragment of the femur ended in a sharp point beveled at the expense of the posterior surface. The condyles of the femur were separated by a line of fracture in the middle line, vertical in direction. A considerable fragment of the femur was found loose above the condyles and behind the lower end of the shaft, and was extracted. The lower end of the sharp fragment was sawn horizontally two inches from its lower extremity in order to furnish a flat surface for apposition with the condyles. The condyles were then drilled, and sutured together with chromic gut and the knee joint flushed with salt solution. The condyles were brought into apposition with the lower end of the upper fragment, and rubber tissue drainage extending to the point of the fracture was inserted. The entire limb, including the pelvis, was then covered with plaster-of-Paris dressing. Primary union resulted. The bones were

firmly united at the end of the tenth week, when the patient was allowed to walk in a light plaster dressing. At the present time, five months after the accident, the patient was able to use the limb without pain. Flexion is possible to more than 30 degrees. There is $1\frac{1}{2}$ inches measured shortening. The amount of lateral mobility in the knee was slight. The amount of flexion was increasing.

DR. JOHNSON said the production of the fracture in this case was rather interesting. The man was quite certain that the injury was caused, not by the impact on the ground, but by a twist of the leg through the rungs of the ladder just as the latter reached the ground. Personally, the speaker said, he was inclined to believe that the injury was produced by the direct fall upon the lower end of the femur. There were no contusions on either side of the knee, such as one would expect from direct violence of any sort.

ON THE THYMUS GLAND TREATMENT OF CANCER.

DR. FREDERICK W. GWYER read a paper with the above title, for which see page 506.

DR. GWYER, in reply to a question as to why he had selected the thymus gland for this purpose, said that after experimenting with several of the glandular extracts, among them that of the pancreas, without any encouragement, it occurred to him that cancer of the thymus was almost unknown, that the disease was very rare in youth, when the thymus gland was prominent, and that it was such a common disease of old age, after the practical disappearance of the gland. He would prefer not going further into the details of his theories regarding cancer and its treatment at this time, but make it the subject of a future paper.